



THE KEYSTONE

# Defender

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STATE COUNCIL OF CIVIL DEFENSE, HARRISBURG, PA.

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## PLANT PLANNING

(Taken from *American Machinist*,  
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WITH THE EMPHASIS in many areas on the evacuation of cities, it might be well to remind ourselves that the latest weapon is not the only one; because hydrogen bombs exist does not mean that much damage may not be still done by "conventional" high explosives, by fire bombs, and by atomic weapons. Let us not forget that we may be hit without warning from the sea (within a 600-mile range from the coast); we may find atomic bombs exploding all over the country at H-hour, set by saboteurs; we may have no warnings of any kind. Furthermore, we are not likely to keep on evacuating all our cities at every crossing of the radar screen.

Let us think over, therefore, defense measures that every industrial plant should be taking at its own location, whether or not it is also making evacuation plans.

Blast does its greatest damage by causing heavy air pressure to first force out, then come back to refill the partial vacuum. This picks up anything in the way that is not bolted down solidly, and smashes it about. Thus, aside from the crater dug by the bomb, most danger is from and to objects displaced by the blast. Collapsing building walls, high, topheavy equipment, and even light equipment that presents much resistance all should be carefully considered.

Underground generator rooms, storage rooms, furnace rooms and the like should be braced, or strengthened with protective low walls, heavy beam ceilings, and sandbags or sheet steel on top. Shelters of this sort could provide considerable personnel protection in all peripheral areas, and might mean the

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## STATURE AT THE TOP

By JOHN M. McCULLOUGH, *Secretary of the Port Authority of Philadelphia*

FOUR YEARS AGO, when a distinguished—indeed a most distinguished—group of officers and civilian heads of the Department of Defense conceded before a committee of the United States Senate that civil defense was "the fourth arm of the national security", it looked very much as though official national thinking on the issue had come of age.

Having established that a "Department of the Home Front" held co-equal status with the Department of Defense, it seemed only the common-

"The measure of success is not whether you have a tough problem to deal with, but whether it's the same problem you had last year."

JOHN FOSTER DULLES.

sense next step to formalize the association.

The most obvious "next step" appeared to be provided, conveniently and logically, within the framework of the National Security Act of 1947, which established the National Security Council. The Council, as the nation's top-level listening post, wherein all intelligence—military, diplomatic, and commercial—is received, digested, and then translated into national security policy, seemed almost to welcome the country's top civil defense administrator.

That "next step" never has been taken. The Federal Civil Defense Administrator is not a member of the National Security Council. Possibly the step has been taken "de facto," in that curious, almost furtive let-not-thy - right - hand - know - what - thy left-hand-doeth fashion that is one of the painful disabilities imposed on rep-

resentative government by the "cold war." But such arrangements too often escape the attention of the general population and it is the attention—the sharply, stridently arrested attention—of the general public which is most gravely required.

Most of us long since have abandoned, since it was foolishly unrealistic, the hope that civil defense, as a religion of national salvation, somehow or other would burst into evangelical fire by some process of spontaneous citizen combustion.

We are content, in all truth not wholly because we make a virtue of necessity, to witness the slow but steady growth of trained cadres. We may enthuse over the undoubted fact that today, far less than even two years ago, does not hear civil defense generally spoken of with contemptuous scorn. The thunder that echoed around the world from Elugelab may have spoken with a more compelling voice than many of us had dared to hope.

But one must be starry-eyed indeed if he does not recognize, that to the great body of men and women who are willing even to accept civil defense as an intelligent subject of conversation, it is regarded as feeble, miserably supported, badly organized, and ineffectual. Though we may be loath to admit that fact publicly we are most ill-advised not to concede it in our operational training and thinking, in our public relations and in our recruitment.

One might say that although the overwhelming majority of the American people have not "bought" civil defense as a doctrine of personal, family, community, and national survival,

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# 25,000 WALK OUT OF PHILADELPHIA

UNTIL YOU TRY, you never quite know what you can do. It was on that basis that Philadelphia tried a "walk-out" evacuation of a 20-block area of office buildings, in which an estimated 25,000 people worked.

Long and hard work went into the preparations for the exercise, so that the Building Managers, the employers, the walkers, and the general public thoroughly understood what they were doing, and why they were doing it.

Because the groundwork was so well and carefully laid, the test far exceeded the best hopes of those who had labored to make it successful. Within a minute after the sirens sounded a special staccato blast, workers began to appear on the street and walk down the Parkway towards the appointed Circle, where they were to congregate, simulating the loading point from which transportation would take them to safer areas, had the test been real.

Throughout the area, wardens were spotted to pick up public reactions, and to check on certain information which would help in later "walk-outs." In addition, the public was questioned by about fifty "Roving Reporters," scattered through the crowd, stationed there by a national polling concern to measure the public's reaction.

Officials estimated that close to 25,000 people moved out on foot from the heart of the city, including judges, members of City Council, business executives, stenographers, telephone repairmen, and waitresses, striding along among them all was the Mayor, Joseph S. Clark, Jr., Director of Philadelphia's Civil Defense not only in title but also in spirit.

"He's there for the work as well as for the glory" commented Dr. Richard Gerstell, in paying tribute to the Mayor's indefatigable support of all civil defense measures in that highly vulnerable city of 2½ million persons.

Much of the value, as well as the weak spots, of the test will not be known until reports have been evaluated; two valuable results, however, were immediately apparent:

1) Many multi-storied buildings, including City Hall itself, which have been procrastinating about the development of CD planning have now appointed floor wardens, worked out evacuation plans, and put them to a test. Which elevators will run to which floors? Which telephone operators will stand by, and which can leave? Which floors should exit from the east doors and which from the west? Details such as these must be worked out, and THEN TRIED.

2) Civil Defense was brought home personally to thousands of men and women (and through their word of mouth, to thousands more) by actual participation, as well as by prior briefing and explanation. They gained a greater understanding of the dangers, and a greater understanding of the protective measures they must be prepared to take. Seeing the Mayor and the City Council taking the exercise seriously, being given time off to participate by their employers, they realized that the problem was a serious one, not mere child's play; the whole picture became more personal and clearer to them.

This is but a beginning in Philadelphia. Other parts of the city will also have their day—the problems will be more difficult in some sections, but much was learned on which subsequent planning will be based.

"It is quite possible we may not have time to evacuate," one of Philadelphia's officials said. "As of the moment, there would definitely not be enough warning time to make such a thing possible, but planning takes time, and study, and experimenting; the Air Force promises increased warning time as the months go on. If we were not ready to take advantage of this, we would be grossly negligent of our people's lives.

"With weapons as they now are, it is imperative that we move as many as we possibly can out from the most congested areas. This does not mean that our whole population must leap to its feet. Those on the perimeter of the city would do better to stay where they are, but in the crowded and critical parts of great cities such as ours, our only hope of saving lives is to disperse them."

"I would rather call this a dispersion than an evacuation," says Mr. Paul B. Hartenstein. "It is a matter of scattering, so that as many people are as widely dispersed as possible.

"We are well aware that there may be no warning," he said. "We know about guided missiles, and all those other things. But if there is no warning, there is not much you can do except duck. What we are working on is what we can do to save the greatest number of lives if we DO have a warning."

More than 40 out-of-town civil defense officials came to observe the Philadelphia exercise, from as far away as Atlanta, Boston, Cleveland and Rhode Island.



Photo used, with permission, from Evening Bulletin.

Quiet, orderly and cooperative, the people from central Philadelphia walked out, by the thousands, following the instructions they had been issued.

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# HOMEOWNERS . . .

## Did Hurricanes Teach You?

### Do YOU KNOW:

Where to find safe water, if your taps don't run?

How to turn off your own water service valve?

How to purify water if you have to drink from an uncertain source?

What foods to store, and how to prepare them?

What to do with frozen foods?

You and your family could get along quite a while without food, if necessary, but you must have safe water to drink. Interruption of this vital service as a result of enemy attack is not the only thing that could happen to your home water supply, though it is the one most people think about . . . if they think at all. It should also be considered, however, that the water might continue to run, but be unsafe as a result of leaking sewage, poisonous chemicals, radioactive materials, or even disease-bearing organisms from biological warfare attacks. You might need to know how to turn off your water valves to prevent such contamination from entering your house, following radio information that water supplies had been found unsafe.

Let us see how much fluid the average family usually has on hand in the normal course of events. Most families have some milk in the refrigerator, some bottles of coca-cola, fruit drinks, soda water, or ginger ale. In addition, most of us generally have some fruit juice or cans of water-packed fruit or vegetables. In addition, you have ice-trays, and 40-80 gallons of water in your hot-water boiler which can be used for drinking if you run short. It may look rusty and unattractive, but this will not hurt you. Strain it through a cloth if you feel that is worth the trouble. That will clear it of must sediment. Even the water in your toilet tanks can be drunk if necessary.

Some families normally keep glass jugs of water in their refrigerators, in order to have cold drinking water. This a good habit for all of us to cultivate. Each householder should figure on a minimum of one gallon of drinking fluid for each member of the family; children under 3 should have an extra gallon per child. This should last you for three days.

### *Turning Off Your Valve*

If word comes through that the water supply is contaminated in your area, or if your own pipes were broken

and flooding your cellar, or if you were asked to turn off your own water in order to maintain fire-fighting pressure in the city, would you know how to do it?

The water service valve is usually located in the basement, or just outside the house, often near an outside faucet. Sometimes it is in a curb box. Not only you, but all members of your family should know where to find the shut-off valve that controls the water service to your house. The valve should work freely. If it requires a wrench, the wrench should be kept available.

If your taps do not flow following an attack, turn off all the water outlets, including taps and faucets, valves on pipes supplying float-controlled equipment such as flush-toilets, air-cooling equipment, and heating equipment.

Turn off the gas or electricity that supplies your hot-water heater after closing your home water service valve, or when your water supply is interrupted for any reason. If you do NOT do this, and the limited supply of water remaining in your hot-water storage tank continues to be heated, an explosion could occur.

Don't telephone anyone to report your lack of water. The officials will know about it. Telephone lines will be vitally needed for more serious CD emergencies.

### *How to Purify Water Easily*

#### *Boiling*

Most water can be drunk safely if it has been boiled for 5 to 10 minutes. It will taste less flat if you add a pinch of salt after boiling, or aerate it by pouring it from one container to another for a few minutes.

#### *Chlorination*

You may have no gas or electric power and so not be able to boil water. In that case, any household bleach, such as clorox or any similar bleach containing hypochlorite (read the label) may be used. Depending on the strength of the solution (given on the label) the amount necessary varies from  $\frac{1}{4}$  teaspoon to ten drops per quart, or from  $\frac{1}{4}$  teaspoon to 2 teaspoons for a five gallon container. After adding the bleach and stirring, let it stand for 30 minutes. It should taste or smell of chlorine. That is your safety sign. While unpleasant, it

is not harmful, and is the best way to be sure you have added enough.

#### *Iodine*

If you have no household bleach on hand, but do have iodine, use that. Add 2 or 3 drops to a quart of water. That, too, should be allowed to stand for half an hour.

A few people will be forehanded enough to provide themselves with water purification tablets. More power to them, and our blessings; but if you are not that forehanded, at least you should scotch-tape the information in this article to the inside of your medicine cabinet. If you ever need these facts, you will need them badly; then it may be hard to find them.

### *What Food Will Be Safe*

After an attack, the contents of cans, jars, cartons, and other food packages that have not been broken, will be safe to eat. Think of radiation as a dust or ash, not as a penetrating ray, and you will know better how to protect yourself from it. You will see that a tight package would protect food. These invisible radioactive dust particles can make you ill if enough get inside your body, so wipe or wash carefully any can, bottle, or other container, or the cooking utensils you use. Such dust can be removed by wiping or washing, but neither soap nor boiling water makes the particles harmless. They are still "hot," and will remain on the cleaning cloth or washing water, so empty or rinse the pails or tubs you use outside the house. Be careful not to allow such particles to reach your mouth. Don't burn contaminated cloths, as this releases radioactive smoke. Put them in a covered receptacle; the decay rate of radioactivity means that they will become less and less harmful as time goes on.

Food that has been stored in closed cupboards or in your refrigerator will be safe, but do not eat any food that may have been on an open shelf, or unprotected, as, for example, in a garden.

Don't hoard food, but do make sure that you have on hand a 3-day supply at all times. Most of us normally have a surplus anyway, what with food that is in the icebox, the canned fruit and vegetables in the cupboard, the cookies, dry cereals, soups, teabags, raisins, etc., that we find on most shelves. It is better to slightly increase the sup-

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## STATURE AT THE TOP

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they are far less reluctant prospective purchasers than they were only perhaps months ago.

How can what we hold to be the inevitable, and, in the light of present realities, unalterable logic of civil defense be applied to convert these would-be purchasers into active possessors—this vast potential into a respectable dynamic?

The question cannot do other than bring forth a faint smile for the same question has been asked so very many times before, only to echo off into unresponsive silence. Experience surely has taught us that there is no one simple answer, no one lamp to rub, no one incantation to mumble, no simple "Open Sesame"—none short of the very catastrophe which civil defense, in its staunch and singular faith, seeks to minimize.

To recall a bit of doggerel which the late George M. Cohan made immortal on the vaudeville stage:

"It's a problem that has driven many brainy drink;

It's the weirdest thing they've tried to figure out . . .

Life's a very funny proposition, after all."

Whether or not appointment of our top civil defense official to the Security Council would be one step which might act as the catalyst in changing our potential citizen volunteer pool into a dynamic corps is by no means assured. But one cannot escape the confidence that it would carry out to the letter the wise recommendation of the Hopley Report six years ago that the Federal Civil Defense Administrator should provide "effective liaison between other governmental and private agencies and the National Military Establishment through serving as a central source of authoritative information on questions concerning civil defense."

If the Federal Civil Defense Administrator is that today, it is neither apparent nor appreciated by the public generally. Too often he seems a rather forlorn figure, a subaltern without portfolio, who is tolerated in the official Federal family somewhere between the lesser assistant secretaries and the kitchen help. That is an utterly cruel and untenable position in which to place any man charged with the colossal responsibilities with which the nation's top civil defense official is charged.

The rather sotto voce suggestion that admission of the Federal Civil Defense Administrator to the Security Council, in some vaguely defined fashion, would

subject him to domination by the military, has no merit. The Bull Board stated its views to the then Secretary of War, the late Judge Patterson, on the issue of the military vis-a-vis civilian control; Judge Patterson approved it, and the Hopley Report confirmed it. On the contrary, the basic philosophy of civilian control of civil defense first was stated by the Bull Board—composed of Army officers of general and field rank!—and carried through without dilution to the "Blue Book" of September 8, 1950.

One grave disability of civil defense from its start has been the lack—or, at least, the seeming lack—of a clearly defined chain of command from the top level of government down through State and local communities. If a position on the Security Council would do nothing else, it might dispel the feeling of filmy command which has been experienced by so many earnest people in so many intolerable situations.

In recent weeks the logic of such a move has been accentuated strongly in, of all places, Western Europe. A few words about them.

At the properly famous Chicago critique, in September, 1950, American civil defense officials met for the first time the urbane, witty, patient, and totally undismayed director general of training, of the civil defense corps of the United Kingdom—Sir John Hodsoll. With refreshing candor, Sir John admitted his difficulties and frustrations, but he regarded them as the normal occupational hazards confronting a man charged with such tremendous responsibilities. Many a civil defense official departed Chicago refreshed, inspired, and fresh armed as a result of the slender Englishman's quietly dogged purpose.

Today, Sir John Hodsoll is con-

sultant to NATO, with headquarters in Paris.

A few weeks ago, the American press carried a report of an address which Field Marshal Viscount Montgomery of Alamein delivered in London. Since he is Deputy Supreme Commander, Allied Forces in Europe, anything he has to say should command respectful attention.

This quotation, slightly abridged, is from the New York Times of October 22, 1954: ". . . Field Marshal Montgomery (asserted) that the 'whole framework of civil defense must exist in peacetime' and . . . that civil defense (must) take its 'rightful place in the national war machine.'"

"'There must be a chief of civil defense and essential means to implement his plans, for unless the program is carried out in peace, a nation will face disaster in a world war because the home front will collapse' Field Marshal Montgomery said."

NATO and SHAPE are the absolute sublimation of the free world's resolve to create military defensive forces to anticipate, detect and intercept any act by any aggressor upon the peace and the security of the self-same free world.

Both—one by deliberate staff appointment, the other in the most vehement possible words—recognize and justify the role of civil defense in this "Age of Peril," as President Eisenhower phrased it, and in the "Grand Alliance of the Free," as former Governor Stevenson described it.

Can it possibly be impertinent or ill-advised to suggest that what good John Hodsoll is to NATO, what the immortal "Monty's" words are to the security of Europe and the United Kingdom, the administrator of civil defense in the United States should be to the National Security Council?

## UNDERGROUND NEAR PITTSBURGH

AN ABANDONED limestone mine just outside Pittsburgh is being surveyed and will be used by the U. S. Air Force as a tremendous warehouse and storage depot. When completed, it will contain a cafeteria, motor pool, auto maintenance shops, carpenter shops, boiler plant, sewage-disposal system, dehumidifier, electrical substation, water supply system, utility lines, and loading docks.

The Air Force estimates that the "face-lifting" will cost about \$5 million, but say that is just a fraction of what a conventional warehouse would cost the government. Upkeep will be cheap since there will be no walls or leaking roof to repair, no

windows to clean, minimum hazard from fire, and many other advantages.

Most of the surveying has been done by local engineers who have made plans for the dehumidification and drainage. The primary purpose for the natural storehouse, will be to keep large quantities of machine tools and spare parts for emergency use.

"We expect to use only two of the four million square feet of available storage space," state Air Force representatives. Outside construction will include a mile-long railway spur, a bridge over a highway, and access roads.

(Business Week, Dec. 4, 1954.)



## PLANT PLANNING

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difference between minor injuries and death for most of your working force.

Despite the damage of concentrated bombing, it has been found that machine tools and other heavy equipment with a high weight-and-strength-to-size ratio are not seriously hurt except for those in the "A" circle of greatest damage. Take advantage of this and let the machines be part of the bulwark that wards off blast and fragment penetration. Locate heavy, solid, but not-too-high stacks of raw materials around and between machines. Pile flat stock horizontally, and stack round and rectangular stock vertically, but well-braced. Avoid high piles of material, and especially keep stacks of small castings low. Disperse stores and materials, decentralize instead of centralize. We won't all be in the "A" ring of complete damage. Those with plants in the "B" and "C" rings can do much to reduce their own loss. No plant can function without its air lines, gas lines, pipe lines of any sort, electrical systems, and conveyors. These are open to complete destruction if a bomb hits close, or the blast is bad. Bury what you can; sectionalize the rest for quick repair. Duplicate lines would help, and duplicate control panels, junction boxes, valves, and accumulators, transformers, power lines and switches will cut lost time. Spare instruments, controls, motors, pumps, and machine-tool components like chucks, tables, tools, fixtures and standardized fixture parts, gears and the like, should be stored in such a way and in such locations that they could be broken out quickly after a raid. This means a long-range plan for tool-room work, but it could pay-off handsomely. Yes, such preparations cost money. But no one ever got something for nothing. You can gamble on nothing ever happening—despite grave indications to the contrary—or you can invest in this type of insurance for your plant.

Your whole plant personnel should be trained to do fast, simple jobs that will save equipment and lives. This means organizing and training fire-fighting squads, first-aid teams, and voluntary emergency squads; everyone in the plant should be trained to look away from the bright light if that is our first knowledge of attack. The light lasts about 10 seconds—long enough for a man to turn, look at it, and be temporarily blinded. The natural reaction will be to look; only intensive training will overcome this tendency.

First aid kits and fire-extinguishers must be located all over the plant; most plants should provide a good many more than the minimum number they now have; emergency water supplies should be established, either with underground lines or with reservoirs, or "fire holes."

Protection of glass, most easily broken structural material (and used increasingly in all stores, apartment houses, and many plants) is very difficult. Heavy 1/2-inch wire mesh mounted on the inside of windows to catch flying particles is the most effective protection. It is not good practice to brace window panels firmly, because a solid wall offers more resistance to blast; it is better to let the windows shatter, and let the blast pass by, if protection can be offered against the flying particles.

### *Suggested Fire Protection*

A Fire party should consist of a chief, with five or six men trained in the proper use of their equipment. Each party should be equipped with 1 stirrup pump, 2 pails, 1 hand ax or light crowbar, and 1 long-handled shovel. In the building, available to them, should be at least 6 gallons of water (in pails or other containers) for every 8000 square feet of roof area. On every floor there should be either two 2 1/2 gallon soda-acid extinguishers, or one stirrup pump and two pails of water for every 4500 square feet of floor area. Sand boxes should also be available, where burning bombs can be deposited.

The suggested number of fire parties per plant is:

Up to 12,000 sq. ft. roof area . . . . .	1
12,000 to 30,000 sq. ft. . . . .	2
30,000 to 75,000 sq. ft. . . . .	3
75,000 to 150,000 sq. ft. . . . .	4
For each additional 75,000 sq. ft. . . . .	1

### *Suggested Rescue Protection*

A Rescue party will consist of a leader with an 8-man team; it is estimated that two such teams should be provided for every 1000 employees.

Team equipment should include:

Utility truck, variety of ropes, chain, inhalator, block and tackle, jacks, portable crane, ladders, acetylene torches, picks, shovels, sledgehammers, axes; tarpaulins, crowbars, wrecking bars, carpenter's saws, hacksaws, wedges, chisels, power drills, and a searchlight.

In addition, each rescue team member should have a personal kit containing:

A simple first aid kit, lineman's gloves, pliers, 1 60-foot 1/2-in. manila rope; pinch bar, utility hatchet, gas mask, steel helmet,

flashlight with lanyard, extra bulb and batteries, box of chalk, 100-yard spool of fish-line, boots, roll of insulating tape, safety goggles, whistle.

### *Suggested Medical Protection*

A medical team will consist of a doctor (if available), 2 nurses (if available), 6 men or women trained in advanced first aid. In addition, all personnel in the plant should take basic first aid training.

A minimum of three medical teams should be provided for each 1000 employees. These should exist in addition to the normal dispensary which will function as a medical treatment center.

Team equipment should include:

2 stretchers, 6 blankets, traction splints, 8 60-foot 1/2-in. manila ropes, replacement supplies for the individual kits, plus equipment suggested by the doctor.

Each team member should have a haversack containing:

Compresses on adhesive and sterile gauze, assorted sterile bandages, triangular bandages, sterile gauze in individual packages, roll of adhesive, burn ointment, spirits of ammonia, scissors, paper cups, 1 in. and 2 in. roller bandages, plain board splints, castor oil or mineral oil to use in eyes, water canteen, trench knife, steel helmet, flashlight with lanyard and spares, whistle, lipstick to mark casualties clearly.

The medical treatment center (or dispensary) should be a well-protected area, centralized for easy access from all parts of the plant, but, if possible, away from other buildings. Doctors and nurses and half the medical aids should work within the shelter treating walking wounded and those brought in by first aid teams; the other half of the medical aids will work in the plant area.

Any plant that has taken the above steps is to be congratulated as complying with rock-bottom, minimum, basic requirements for this atomic age. Any plant which has developed less protection than outlined above after four years of available information, is running the risk of being considered negligent of its responsibility to personnel and property.

## REVISED LISTS

A new year starts; the traditional good intentions, tidying up, and "new leaves" are in everyone's mind. May we include revisions of the Keystone Defender mailing lists? Will you help us by letting us know the names of people who have resigned, moved away, or are no longer active? A good New Year Clean-Up of your list would be appreciated.



# NERVE GAS

*"Whether or not gas will be employed in future wars is a matter of conjecture, but the effect is so deadly to the unprepared that we can never afford to neglect the question."*

This warning is to be found in General of the Armies John J. Pershing's final report on World War I, but it is as true today as when he wrote it—more so, due to the discovery of nerve gas in the intervening years.

Magazine articles during the past two years have brought sharply to the public attention this question of the strategic importance of nerve gas. Writing in *Colliers*, Mr. Cornelius Ryan presented the case as one with which our home defense must definitely be concerned. He sees the possibility of the nerve gas load of a single heavy bomber, stated as seven tons, producing a cloud which, under favorable meteorological conditions, might carry an effective concentration over a very extensive area—perhaps 100 miles.

John and June Robbins, writing in the November, 1953, issue of "This Week," say "military men consider that nerve gas is perhaps nearer to being the ideal weapon than fission bombs."

Captain Cecil H. Coggins, U. S. Navy consultant in chemical warfare for the NATO organization in Paris, says, "Russia periodically proposes to outlaw atomic weapons. That probably sounds good to the American people. But the truth is that while they are laying down their pistol, they've got a couple of knives behind their back—biological and chemical warfare." Captain Coggins estimates that Russia has 250,000 tons of chemical weapons including 80,000 to 90,000 tons of nerve gas, which paralyzes and kills with great pain.

"They would like to outlaw the weapon in which they are the weakest," he says. "We shouldn't swallow that kind of talk."

It is believed that the public wants to have an appraisal of nerve gas in terms of its considered effectiveness. Admittedly the variable factors in gas warfare make for difficulty but this should not preclude an attempt to promote understanding of the problem.

Undoubtedly it has taken much time on the part of CD leaders to bring about in the minds of our people a reasonable degree of understanding of even the atomic problem. But if nerve gas is also a definite threat, the program will be dangerously incomplete

unless it also includes chemical defense measures.

Writing for the *Armed Forces Chemical Journal* (April, 1954), Dr. James H. Defandorf, Pharmacologist and Health Services Consultant for FCDA, has this to say:

"Chemical attack in the form of nerve gases is generally conceded to be feasible against the critical target area populations of the United States. It is believed that in all-out enemy attack, nerve gases would profitably be employed in conjunction with atomic weapons.

... "It appears probable that escort bombers could lay down a high concentration of nerve gas in a band covering the outlying portions of the target, which might well compound the effects of atomic warfare on the more densely populated areas in the city, and cause many additional casualties.

*(Editor's Note: Let's not ignore this factor in weighing the advisability of city evacuation or dispersal.)*

"In addition, the nerve gases might be used against selected individuals or groups in sabotage or subversive actions and to contaminate ventilation systems or food and water supplies, but these are situations which can only be handled through efficient local guarding and inspection procedures.

"The gas mask presents the surest and least expensive method of protection against chemical warfare agents, and it is believed that the entire population of critical target areas should be equipped with some sort of protective mask. It is not felt necessary that protective masks be furnished for individuals living outside critical target areas.

"The main problem in relation to the lightweight mask is to determine how it will be made available to the

citizens. It is not believed that Congress will appropriate funds in the amount that would allow this item to be supplied free to the citizen. Every effort is being made to determine how this can be produced and sold, probably through normal trade outlets, to the individual.

... "It is agreed that it would be desirable for each family to have its own shelter, and our recommendation would be that in the event of an air raid warning, each individual should don a mask and go to a shelter. He or she would then have protection against all airborne toxic agents.

"The other item of importance is the atropine self-injection unit, following exposure to nerve gas and the appearance symptoms. It is necessary that two milligrams of atropine sulphate be injected *immediately*. There are several devices for this purpose, and FCDA is currently stockpiling these items. It is believed that two or three of these self-injection devices should be made available for sale to the individual citizen at the same time as the gas mask.

"The gas mask and the atropine self-injection units are considered to be the most important parts of the program for defense against chemical attack."

On November 5, 1954, FCDA announced that 8000 masks (only 1% of the *minimum* number needed for civil defense workers protection) have been ordered by state civil defense groups. FCDA is lending samples of the approved masks to regional and state CD offices in order to stimulate orders by CD groups.

Masks may be obtained on matching funds. They were developed by the Army Chemical Corps for civilian use, and furnish the same protection as the standard Army service mask. They cost from \$6-\$7 apiece, and come in assorted sizes for male and female CD workers. These new masks furnish protection against the inhalation of all known chemical agents, including nerve gas, as well as against biological warfare agents, and radioactive dusts.

A lighter weight civilian mask and an infant protector are also being developed, according to FCDA.

"Large scale chemical warfare attacks with the deadly nerve gas are completely within the capability of the enemy," FCDA warns.

## ON THE USE OF GAS:

*"A nation, regardless of its protestations or regardless of its intentions, if it is driven to the wall, if it feels that its national existence is threatened and that it is losing a war, will turn to any weapon that it can use.*

*"Furthermore, a nation determined on aggression, no matter what its protestations, may take an opportunity to deal by surprise a crippling blow if it feels that such a blow may be sufficiently devastating to insure success."*

GENERAL WALTER BEDELL SMITH.



## HOMEOWNERS

(Continued from page 3)

ply you normally keep on your shelves than it is to put aside a particular emergency ration, because some packaged foods spoil when stored for long periods.

Bear in mind that you may need to eat cold food for a while. Supplies of canned fruits and vegetables should be substituted for frozen and fresh, which spoil easily in the event of refrigeration failure.

It is good to avoid salty foods, since drinking water may be at a premium; raisins and chocolate are good energy builders and take up very little room. Canned fruits, fruit juices, vegetables, soups, fish, milk, meat, and baby food, as well as dried foods make a good emergency ration.

After attack the civil defense authorities and the food industry will make every effort to get food stocks flowing again, but it is quite likely that tight food rationing will go into immediate and long-lasting effect. There is likely to be a complete "freeze" on all sales of food immediately following an attack. It is for this reason that all householders should be prepared to be self-sufficient, without going to a store, for at least three days.

### Frozen Foods

The food in your refrigerator or home freezer will last for about 36 hours if it started out frozen solid. Perishable items should be eaten or cooked after twelve hours. If you cannot cook them, throw them out before they contaminate the rest of the food. Once foods have started to thaw, they spoil very quickly; never refreeze them until they have been cooked.

Milk spoils easily; if in doubt about the purity of yours, boil it. It won't taste very nice, but it will be safer.

Remember that biological and chemical warfare may be used to affect all food supplies. Instructions will be given locally by civil defense authorities if this is suspected. Follow official instructions carefully. These will reach you through your warden, by radio, or by your newspaper. Rumors designed to make people throw away perfectly good food are often started by enemy propaganda. Be ready to do your part in stopping these. Don't listen to them; don't pass them on. Pay attention to *official* instructions only. To be safe, paste the true facts inside your cupboard door now, when you can do so calmly. Then, if trouble comes, you will be able to refer to them and will know what to believe.

(See FCDA Manual on Home Sanitation)

## DID YOU KNOW

THE Seventh Day Adventists have trained 18,000 first aid *instructors* since they started their civil defense program, following their World Convention in 1950. They have also stockpiled food, clothing, and disaster kits at 300 welfare centers. Their goal is to make the denomination's 3000 churches in North America all centers for casualty care in a disaster.

\* \* \*

The DuPont Company has built a huge underground concrete and steel vault "well beneath" one of its buildings near Newark, Delaware, in order to protect its most vital corporate records against atomic bombing. Elaborately equipped with air conditioning and other devices necessary to sustain life and protect records in event of attack, the storage chamber is the first installation of its type to be described in detail to the public. Other installations have been built by other companies and by the government, but have been kept secret both as to location and as to type of protection afforded. The DuPont vault is concrete-lined, large enough to hold seven medium-sized houses, with one of its sections the height of a two-story house. According to the company, the entire structure is capable of weathering successfully a direct atomic bomb hit.

\* \* \*

At the cost of less than a cent a day most homeowners soon can have their own private air raid alarm system, alert and ready 24 hours a day to wail its warning. This device can be hooked into an AC or DC radio set. FCDA officials say that the as-yet-to-be-named item is the first home warning device to meet all necessary requirements. The unit, discovered almost by accident in solving a different electronic problem, will be adaptable to the Conelrad emergency broadcasting system, and will sell for a very low cost—in the neighborhood of \$10.00 apiece.

\* \* \*

The latest Government Printing Office list of "best-sellers" is viewed as an interesting commentary on the fact that the people of this country are NOT apathetic about the dangers facing them; that their inertia comes not from lack of concern but from lack of good leadership.

The GPO list for the past year, in order of circulation:

- 1) Infant Care; 2) Prenatal Care
- 3) The Child from one to six
- 4) Survival Under Atomic Attack.

## STATE DIRECTORS

ALTHOUGH there was lively discussion, leaders from all 48 States agreed late this autumn on several major points which they presented to FCDA following the annual meeting of the National Association of State Civil Defense Directors in Chicago.

Their first point of agreement was in sharp contrast to the policy being followed by FCDA officials, particularly by Governor Peterson. The directors agreed that "public pronouncements about the evacuation of major target cities before an enemy air attack should be kept to a minimum at present." They felt that this should be the policy *until the Air Force can guarantee a definite early warning*, and until more thorough studies are made of the tremendous problems concerned with evacuation. Loose and premature talk is confusing to the public, and harmful to the program.

The State officials also urged that President Eisenhower spark a stepped-up public education program on the need for civil defense by making television appearances on the subject. This should follow, they said, a series of meetings between the President, his advisers, governors, mayors, and industrial leaders on the country's defense needs. (Note: Two hundred and forty mayors, city managers, and leaders of industry were invited to just such a meeting in Washington, December 2-3.)

The State Directors felt that the public should be informed far more clearly than is now the case as to how vulnerable the nation is to enemy guided missile attack, particularly in reference to the possibility of missiles with atomic warheads which could be fired from submarines, surfacing offshore at a given moment without the slightest possible warning.

In regard to warnings, the officials urged that the Air Force be solely responsible for sending out appropriate warnings of impending air attacks. They asked that each Air Division fix the meaning of warning "yellow," in terms of time. This question of the specific time an attack might be expected is of paramount importance to each target area.

The Association filed a request that the Federal Government supply all states with an adequate number of radiological instruments; it also made a formal request to the Defense Department to make some of its radio channels and equipment available to CD forces.



# MATCHING FUNDS

JUNE 30, 1955, will be the final date on this year's allocation of Federal Matching Funds; the amount assigned to Pennsylvania is \$895,362.00. "Nearly all of this sum will be made available for use by counties, cities, boroughs, towns and townships of the Commonwealth," stated Dr. Richard Gerstell, Director of the State Council of Civil Defense.

The greater part of the allocation of Federal funds has been made for communications equipment, including such items as two-way radio, and generators; the second biggest item for which matching funds will be available is sirens, or other warning device systems. The following categories are:

Engineering Equipment  
Rescue Tools and Equipment  
Training and Education  
Health and Special Weapons  
Public Education  
Emergency Welfare.

FCDA has not allocated any funds this year for use in the purchase of fire fighting equipment. This is a Federal decision; requests for this type of equipment will be disapproved.

All county civil defense directors have been furnished with the FCDA Manual M21-1, dated October, 1954. Town, township, city, and borough civil defense directors are urged to contact their County Director for details.

Three hard and fast rules pertain to the filing of applications:

- 1) They must be filed on official application forms (FCDA Form 233, Parts I, II, and III).
- 2) They must be prepared in strict accordance with instructions contained in "Federal Contributions Manual" (M25-1 Revised).
- 3) They must be submitted to the State Council of Civil Defense, through local and county CD Directors, prior to March 15, 1955.

The Federal Civil Defense Administration will accept applications for matching funds only from the State and its recognized political subdivisions. Each and every application must bear the signature and title of a recognized State or local government official. Applications which are incomplete or improperly prepared will be returned to the applicant, losing valuable time.

The State Council of Civil Defense has no authority to approve or disapprove any application. The State Council merely checks the application for accuracy of preparation, and forwards it to the FCDA, which alone has the power to approve, or to disapprove, the request.

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## County and Township Directors

THROUGHOUT THE YEAR, as one goes about the State, one hears repeatedly, "There ought to be a law about that," or, "Why isn't there something in the law making that clear?" or, "If this were only spelled out in the law, we could get somewhere."

All right, Township and County Directors, here is your chance!

A new legislature is about to meet: new bills will be drafted and presented for consideration; this is your time to speak your piece.

Says Dr. Richard Gerstell, State Civil Defense Director:

"If anyone has requests pertaining to new laws or bills, or suggestions he would like to see incorporated into existing statutes dealing with civil defense, he should submit such requests to me, in writing, at the State Council of Civil Defense, Capitol Building, Harrisburg, Penna. This should be done immediately, so that I receive them as close to the first of January as possible."

Matters of the type that you might wish to express your opinions on are:  
... relation between Civil Defense and the Governor's Disaster Committee;  
... laws covering the building of adequate shelters in all new buildings;  
... clarification of the landlord's legal responsibility in buildings marked as public shelters;  
... accident insurance for injuries received during exercises;  
... penalties for failure to cooperate with civil defense.

Do not get the idea that these, or other topics, will necessarily be accepted if proposed; they will, however, be given thorough consideration and careful thought, if presented to Dr. Gerstell immediately.

## BOOKS TO NOTICE

THE United States Chamber of Commerce has published the edited proceedings of the Businessmen's Conference on "Industrial Defense in the Atomic Age." This was the large three-day conference held in Washington, D. C., last June. Copies of the proceedings are available at \$1.00 a copy, or 50¢ for additional copies, from:

The Manufacture Dept.  
Chamber of Commerce of U. S.  
1615 H Street, N. W.  
Washington 6, D. C.

\* \* \*

An industrial defense planning manual has been prepared by the American Iron and Steel Institute for the Business and Defense Services Administration. It presents a complete step-by-step program for company managements to protect personnel, plants, and records, and to maintain continuity of production.

\* \* \*

One of the most helpful booklets on the probable effects of attack on human behavior, panic, hysteria, and the like, has been put out by the American Psychiatric Association, 1785 Massachusetts Ave., Washington 6, D. C. It is entitled "Psychological First Aid."

All Medical Divisions, First Aid instructors, Mass Care Center Managers, and those likely to be dealing with numbers of people soon after attack are urged to obtain a copy. The price is 35¢ for one copy; 25¢ from 10-99 copies; decreasing price for quantities. The format is attractive; the material is full of common sense; it is worth taking the trouble to write for a copy.